

**LISTING OF CLAIMS**

1. (Currently Amended) At least one isolated pigmented anaerobic bacterium comprising a 16S rRNA DNA sequence at least 95% homologous to a sequence selected from the group consisting of SEQ ID NOS: 3, 4, 5, 6, 9, 10 and 13 wherein the bacterium causes, either directly or in combination with other pathogenic agents periodontal disease in companion animals[[,]].
2. (Original) The bacterium according to claim 1 comprising a 16S rRNA DNA sequence at least 99% homologous to a sequence selected from the group consisting of SEQ ID NOS: 3, 4, 5, 6, 9, 10 and 13.
3. (Original) The bacterium according to claim 1 comprising a 16S rRNA DNA sequence at least 99.5% homologous to a sequence selected from the group consisting of SEQ ID NOS: 3, 4, 5, 6, 9, 10 and 13.
4. (Original) The bacterium according to claim 1 comprising a 16S rRNA DNA sequence selected from the group consisting of SEQ ID NOS: 3, 4, 5, 6, 9, 10 and 13.
5. (Original) The bacterium according to claim 1 which is *Bacteroides denticanoris*.
6. (Original) The bacterium according to claim 5 which is ATCC PTA-5881 or a bacterium having all of the identifying characteristics of ATCC PTA-5881.
7. (Original) The bacterium according to claim 1 which is *Porphyromonas levii*.
8. (Original) The bacterium according to claim 7 which is ATCC PTA-5882 or a bacterium having all of the identifying characteristics of ATCC PTA-5882
9. (Original) The bacterium according to claim 1 which is *Tannerella forsythensis*
10. (Original) The bacterium according to claim 9 which is ATCC PTA-6063 or a bacterium having all of the identifying characteristics of ATCC PTA-6063

11. (Original) The bacterium according to claim 1 wherein the companion animal is a cat or a dog.

12. (Currently Amended) An immunogenic composition comprising the pigmented anaerobic bacterium according to ~~any of claims 1 through 11~~ claim 1.

13. (Original) The immunogenic composition of claim 12 wherein the pigmented anaerobic bacterium is inactivated.

14. (Original) The immunogenic composition of claim 12 further comprising a pharmaceutically acceptable carrier.

15. (Currently Amended) A vaccine for treating or preventing periodontal disease in companion animals comprising an immunologically effective amount of the bacterium according to ~~any of claims 1 through 11~~ claim 1 and a pharmaceutically acceptable carrier.

16. (Original) The vaccine of claim 15 wherein the bacterium is inactivated.

17. (Currently Amended) [[A]] The vaccine composition as in claim 15, further comprising an adjuvant.

18. (Currently Amended) A method for treating or preventing periodontal disease in companion animals comprising administering to a companion animal in need thereof, a vaccine composition according to ~~any of claims 15, 16 or 17~~ claim 15.

19. (Currently Amended) A method for diagnosing periodontal disease in companion animals by analyzing a sample from the oral cavity of the companion animal wherein the presence of one or more pigmented anaerobic bacteria according to ~~any of claims 1 through 11~~ claim 1 in the sample is indicative of disease.

20. (Currently Amended) [[A]] The method according to claim 19 wherein the presence of a polynucleotide comprising a 16S rRNA DNA sequence at least about 95% homologous to a sequence selected from the group consisting of SEQ ID NOS: 3, 4, 5, 6, 9, 10 and 13 in the sample is indicative of disease.

21. (Currently Amended) [[A]] The method according to claim 20 wherein the presence of a polynucleotide comprising a 16S rRNA DNA sequence at least about 99% homologous to a sequence selected from the group consisting of SEQ ID NOS: 3, 4, 5, 6, 9, 10 and 13 in the sample is indicative of disease.

22. (Currently Amended) [[A]] The method according to claim 20 wherein the presence of a polynucleotide comprising a 16S rRNA DNA sequence at least about 99.5% homologous to a sequence selected from the group consisting of SEQ ID NOS: 3, 4, 5, 6, 9, 10 and 13 in the sample is indicative of disease.

23. (Currently Amended) [[A]] The method according to claim 20 wherein the presence of a polynucleotide comprising a 16S rRNA DNA sequence selected from the group consisting of SEQ ID NOS: 3, 4, 5, 6, 9, 10 and 13 in the sample is indicative of disease.

24. (Original) The method according to claim 19, wherein said analyzing step includes analyzing the sample using a method selected from the group consisting of PCR, hybridization, and antibody detection.

25. (Withdrawn)

26. (Withdrawn)

27. (Withdrawn)

28. (Withdrawn)

29. (Withdrawn)

30. (Original) A biologically pure culture of bacteria wherein the bacteria comprise a 16S rRNA DNA sequence at least about 99% homologous to a sequence selected from the group consisting of SEQ ID NOS: 3, 6, 9, 10 and 13.

31. (Currently Amended) [[A]] The biologically pure culture of bacteria according to claim 30 wherein the 16S rRNA DNA sequence is at least about 99.5% homologous to a sequence selected from the group consisting of SEQ ID NOS: 3, 6, 9, 10 and 13.

32. (Currently Amended) [[A]] The biologically pure culture of bacteria according to claim 30 wherein the 16S rRNA DNA sequence is selected from the group consisting of SEQ ID NOS: 3, 6, 9, 10 and 13.

33. (Currently Amended) [[A]] The biologically pure culture of bacteria according to claim 30, wherein the biologically pure culture of bacteria which is independently selected from: ATCC PTA-5881 or a culture having all of the identifying characteristics of ATCC PTA-5881[.]; ATCC PTA-5882 or a culture having all of the identifying characteristics of ATCC PTA-5882; or ATCC PTA-6063 or a culture having all of the identifying characteristics of ATCC PTA-6063.

34. (Withdrawn)

35. (Withdrawn)